AUTHOR: Murav'yev, M. S., Docent SOV/[illegible]

TITLE: Rational Methods of Establishing Elevation Datum Levels and Location Starting Points for Large Water Power Development Surveys (Ratsional'nyye metody sozdaniya vysotnogo i planovogo obosnovaniya geodezicheskikh nablyudeniy na krupnykh gidrouzlakh)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aero-fotos"yemka, 1958, Nr 4, pp 113 - 120 (USSR)

ABSTRACT: Ground bench marks are at present most commonly used as a datum level of elevation measurements in water power developments and in the subsequent recording of structure deformation. Apart of these bench marks others are also used which are driven to a certain depth. They are termed mud-obliteration-proof bench marks. Investigations carried out recently by the TsNIIGAiK of such ground bench marks showed that ordinary surveying bench marks are subject to frost swelling influences and hence that they do not give constant elevation. As in recent times casing-pipe bench marks are widely used as elevation datum levels

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and as location stations. Special investigations were carried out by the Chair of Applied Geodesy at the MIIGAiK concerning the behaviour of such a bench mark under the influence of the annual variation of temperature. For this purpose such a bench mark was buried in the courtyard of the MIIGAiK. Into the casing pipe a second pipe with a smaller diameter is introduced to the bottom of which an invar wire is permanently fixed. The other end of the wire is connected to a string slung around the block of the bench mark. The wire carries a scale. The elevation of the bench mark pipe is determined by a precision leveling. Observations are still under way. The preliminary results can be summarized as follows: 1) In Moscow, the geoisotherm is located at a depth of 19 - 20 m. 2) The casing-pipe length varies through 1,5 - 2 mm. 3) Length variations and hence the modifications of elevation are due to atmospheric temperature fluctuations. 4) Temperature waves penetrate very slowly to greater depths. In

this connection a new design of ground bench marks is suggested: A gallery is excavated into the slope to a sufficient depth, into the face of which a 3-4 inch pipe is driven to a depth of 5 m. The pipe projects 60 - 70 cm into the gallery. It is fitted with a spherical plate carrying the mark. The part of the pipe driven into the ground is perforated, and concrete is injected through the tube, thus the pipe being solidly fixed in the ground. The second section of the paper deals with problems encountered in the establishment of a location starting point for the observation of shifts and deformations in water power structures. Experience collected in the Tsimlyanskiy water power development showed that the triangulation net which is used as a base for such observations exhibits several deficiencies, which are pointed out in this paper. This experience made the author suggest another scheme of the organization of shift record

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observations for the Kakhovka water power developmert, which is described. Three methods are presented which are to be applied jointly in controlling the location of the stations in each base range line. Triangulation is to all intents and purposes not rejected for water power developments. The use of a triangulation net for recording slipping and settling as proposed by Professor A.I.Durnev is, however, considered erroneous according to the experience collected in the Kuybyshev water power development. The triangulation net must be established with the maximum attainable accuracy as from this net the main axis of the power house must be staked, this being the principal purpose of the triangulation net. There are 2 figures and 1 table.

ASSOCIATION: Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii (Moscow Institute of Surveying-, Aerial Surveying-, and Cartography Engineers)

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3(4)

AUTHOR: Murav'yev, M. S., Docent SOV/154-58-5-6/18

TITLE: Surveying Methods of Observing Foundation Displacements of Hydrotechnical Structures (Nablyudeniya geodezicheskimi metodami za sdvigami gidrotekhnicheskikh sooruzheniy po ikh osnovaniyu)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka, 1958, Nr 5, pp 53 - 65 (USSR)

ABSTRACT: From 1953 to 1956 specialized surveying research was carried out by the Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii (Chair of Applied Geodesy at the Moscow Institute of Geodesy, Aerial Surveying, and Cartography Engineers) concerning the horizontal slipping of concrete structures in the water power development of Tsimlyansk. For these purposes a method of specialized observations of measuring stations was developed and designs of corresponding apparatus were worked out, which fully stood their test in practical work. These methods are based upon the utilization of movable bench marks and were developed by the author. Results of the measurements

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and the nature of this method have been described in detail in another paper (Ref 1). These observations were intended to provide information on the horizontal slipping of concrete structures during the filling period of the reservoir and during the first stage of operation. They led to the following conclusions: 1) It was confirmed that straight gravity-type structures show seasonal variations. The main cause for this phenomenon is the temperature influence of the surroundings. 2) Records compiled of elevation measurements at the crest and in the dam conduit showed that the data collected in crest observations indicate a normal settling, whereas data originating from dam conduit observations even reveal "positive" settling. 3) Observations of measuring stations require 2 - 3 days, whereas determinations with a triangulation net take one month. 4) The records compiled at the Kakhovak water power development fully substantiate the results obtained at Tsimlyansk. This paper describes the most expedient succession of steps in the organization and the compilation of records of horizontal slipping

and of settling of the foundations of concrete hydrotechnical structures with the help of surveying methods. This includes a separate consideration of the total deformation of that part of the structures being located entirely above the foundation. The essential feature of this method is the circumstance that observations are directed immediately toward the foundations, neglecting the superstructure. The observations must be carried out according to such a method as to permit simultaneous and independent measurements of the foundations of the structure and the deformation of that part being located above the foundation. The author suggests the application of a system of dry deep-set bench marks combined with measurement station observations. Proceeding from the lay-out of the structure in question the system of deep-set bench marks can be arranged according to a single-stage or to a double-stage scheme. In this paper the single-stage scheme is described. The base points, their erection and the performance of periodic observations are described. There are 8 figures

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Surveying Methods of Observing Foundation Displacements of Hydrotechnical Structures SOV/154-58-5-6/18

and 1 Soviet reference.

ASSOCIATION: Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii (Moscow Institute of Geodesy, Aerial Surveying, and Cartography Engineers)

SUBMITTED: July 15, 1958

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SOV/154-58-6-6/22

5(4)

AUTHOR: Murav'yev, M. S., Docent

TITLE: Geodetical Work of Especially High Accuracy for Assembling Complicated Machines of Big Dimensions (Geodezicheskiye raboty osobo vysokoy tochnosti pri montazhe slozhnykh krupnogabaritnykh mashin)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka, 1958, Nr 6, pp 39 - 66 (USSR)

ABSTRACT: Very large and complicated machines with several blocks weighing dozens of tons are used at present for the surveying work. These apparatus often extend over hundreds of meters or even kilometers. They must be adjusted with tolerances of tenth and hundredth parts of millimeters concerning the position of individual blocks between each other and a certain initial point. The total error in surveying work is not to exceed 0.1 mm. From this point of view, a possible example is given here, and the methods to solve the set problems are investigated for this task. It is supposed that the blocks of a machine are required to be placed on a ring-shaped foundation, and that each of these blocks has two fixed

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coordinate points, the position of which is exactly determined with reference to the technological axes of the block. All blocks are to be placed on the foundation in such manner that all coordinate points take a certain position in height with reference to the center of the machine. A scheme is given to solve the set problem. The most important and difficult part of the work is solved by creating a system of supporting lines (chords) behind the obstacle (wall). Then, the following problems are treated: 1) Position and height supporting frame for the assembly of the machine. N. N. Lebedev, Docent of the MIIGAiK, carried on special investigations. He showed that, under consideration of the radial dimensions, the shape of construction, etc., the most convenient triangulation scheme is a central system of n triangles that are identical with each other. 2) Preliminary calculation of the accuracy of the device to determine the position. It is shown that 10 μ should not be exceeded in any surveying operation for the mean deviation square.

 3) Possibility of determining the block position by the

height from the central bench mark by means of a leveling instrument. It is shown that the height adjustment of the machine blocks is less complicated, and can be executed with the known means of surveying practice. Much more difficult is the adjustment of machine elements to the right position for surveying based on the points of the position frame, which are situated on the foundation. This task was essentially new to engineering surveys, and demanded the design of special instruments and devices, and at the same time the working out of methods to use them. All these problems were solved by the author. These new technical means for such kind of work include a fixed survey mark placed on the foundation at the circumference of the central polyhedron systems. This mark as well as its erection are described. 4) Portable geodetic reading microscope. This is used for precision work connected with linear measurements, the placing of marks on the wire, the centering of marks, the laying of supporting chords by means of wire. Such a microscope designed and manufactured under the direction of the author at the MIIGAiK is described here. 5) Survey mark fixing

the coordinate points on the machine blocks. Such a mark is described here. It was especially developed and tested in the laboratory, and it fully meets the requirements. 6) Portable survey marks for chords. The design of such a mark is described. 7) Survey auxiliary marks. The design of such a mark is given in short. 8) Means for eliminating the errors in centering the instrument and reduction of the line of sight. In the present case, the error in centering is eliminated by providing the theodolite TB-1 with an attached coupling having an opening which is equal to the diameter of the ball centers of survey marks. This coupling is in alignment with the vertical revolution axis of the theodolite. 9)Measuring apparatus and scales. These play a very important part in the solution of the problems set here. Some of them are described here. 10) Adjusting elements. These are calculated on account of the geometric parameters of the machine and the project scheme of the plant before the placing of the machine blocks in the right position for measuring. 11) The adjustment of the machine blocks by the height and azimuth is described. Participating in the investigations were: O. D. Klimov, Candidate

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of Technical Sciences, and N. L. Grigor'yeva, Engineer. 12)The adjustment of the machine blocks by the radial direction is explained. 13)The experimental studies were carried on in the laboratory at the kafedra prikladnoy geodezii MIIGAiK (Chair of Applied Geodesy at the MIIGAiK) for determining the real possibility of using the methods, devices, instruments, apparatus and auxiliary means described here. The characteristics of the possible accuracy for work with the mentioned apparatus and methods were obtained. The corresponding calculations are pointed out. Calculations on the basis of the investigations carried out show that by means of the method given here and the new technical apparatus the requested accuracy of 0.1 mm can be reached. There are 19 figures and 1 Soviet reference.

ASSOCIATION: Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii (Moscow Institute for Geodesy, Aerial Photography and Cartography Engineers)

SUBMITTED: August 1, 1958

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MURAV'YEV, M.S.

AUTHOR: None Given

SOV/ 6-58-6-20/21

TITLE: Chronicle (Khronika)

PERIODICAL: Geodeziya i kartografiya, 1958, Nr 6, pp. 78-79 (USSR)

ABSTRACT: From April 24 - 26, 1958, a scientific-technical conference took place at the Moscow Institute of Geodesy, Aerial Photography and Cartography Engineers (Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii). Besides the professors, teachers and students of the institute it was attended by following scientists: representatives of the production organizations, of the scientific research institutes and universities. P. S. Zakatov, Director of the Institute, opened the conference and communicated the results of the scientific research work carried out in the past year: he also spoke about the problems concerning the agenda.
At the plenary sessions the following lectures were held: A. I. Ivanov, Docent: "Fighting Revisionism in the Present Stage". A. I. Durnev, Professor: "On the Construction and the Principles in Balancing the Principal Geodesic Network of the USSR". G. D. Rikhter, Professor, participant in the Antarctic expedition: "Oases of the Antarctic and the Charac-

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teristic Features in Surveying".

At the sessions of the geodesic section the following lectures were held:
A. M. Virovts , Professor (or more probably: Virovets): "On the Evaluation in Rectangular Coordinates of Some Types of Geodesic Networks According to Directly Measured Data at the Ellipsoid". M. S. Murav'yev, Docent: "On Monuments of Especially High Stability". V. P. Kozlov, Candidate of Technical Sciences: "Calculation of the Approximative Weight Values of the Most Probable Values in Geodesic Networks". V. G. Selikhanovich, Docent: "The Life and Pedagogic-Scientific Activity of A. P. Bolotov". V. D. Bol'shakov, Candidate of Technical Sciences: "Optical Distance Measurement at Night". N. V. Yakovlev, Assistant: "On the Problems Concerning the Method Employed in the Precision Measurement of Angles in Municipal Triangulation of First Order". A. K. Pevnev, Aspirant: "On the Project of a Level With Freely Supported Mirror". Ye. I. Donskikh, Aspirant, Chief Engineer of the Geodesic Department in Building the Kuybyshev Water Power Central: "Triangulation of the Kuybyshev Water Power Central During Prospecting". A. S. Dmitriyev, Teacher: "Extracts From the

History of Geodesy and Cartography in the First Years of Soviet Government (1917 - 1923)".

1. Cartography 2. Geodesics 3. Scientific reports

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SOV/154-59-2-3/22

3(4)
AUTHOR: Murav'yev, M. S., Docent

TITLE: Present Demands of Engineering Geodesy on the Construction of Geodetic Instruments (Sovremennyye trebovaniya inzhenernoy geodezii k konstruirovaniyu geodezicheskikh instrumentov)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka, 1959, Nr 2, pp 15 - 23 (USSR)

ABSTRACT: The present paper deals with the principal requirements that are to be compiled with by new surveying instruments, with reference to the high accuracy required today in surveying operations over long distances of hundreds of meters and even kilometers. This applies to the case of riverways, to the construction of hydraulic power stations, etc. The demands made on the engineering theodolites are the following: 1)magnification of 30 - 40^{x}, 2) telescope designed on an inverter (inverta) basis, which makes it possible to exclude the error arising on focusing in collimating leading lines, 3) an accuracy of 1" in reading on the horizontal circle, 4) the theodolite must feature a device to center it on the point with an accuracy

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of 5 - 8μ. Such an experimental instrument is being built at the Chair of Applied Geodesy. V. A. Belitsyn supervised this construction, and his death is a major drawback confronting the completion of the instrument. Special centers, adjustable as to the height, as well as theodolite centerings above them were devised at the same Chair. They are depicted in figures 1,2 and 3. A sphere is used for centering; unlike the instruments of the Firm Wild, however, the sphere is set in the centering and the instrument rests on the sphere, which is simpler and better. The need is felt of a special engineering levelling instrument for large-scale production. It would have to comply with the following requirements: 1)magnification of 40^{x}, 2) a tube designed on the inverter (inverta) principle, 3) the instrument is to feature an oscillating or floating prism, 4) its accuracy should correspond to that of a levelling instrument of the 1st order. Figure 9 shows such a model, built under the supervision of V. A. Belitsyn at the MIIGAiK. Industry is required to manufacture invar measuring tapes. The foremost demands made on them is for the tape surface to

be symmetrical with respect to the longitudinal axis. Other requirements are mentioned as concerns mark graduation, mark thickness, etc. The need is also felt of a special portable microscope for geodetic purposes, which should comply with the following requirements: 1) magnification about 30x, 2) it must feature a standardized microscope, 3) operational distance of 60-70 mm, 4) knee bent telescope, 5) focusing in depth not less than 1 mm, 6) a device to illuminate the target, 7) pivoting of the micrometer casing as well as of the main tube of the microscope around the line of sight must be secured. Such an instrument was built at the Chair of Applied Geodesy and the production specimen is already completed. Portable auxiliary signals of a stronger construction are required in practice. Figures 16 and 17 show such a model, built by the above-mentioned Chair. In practice, a comparison between high-precision measured values in nature is of great importance. A telemetering instrument is therefore required, by which it is possible to establish such comparisons in a quick and simple way. The carrying out of such a task is

apparently possible by the aid of interference range finders. Finally, the practice often requires that the same angles be set up with high accuracy. The Chairs of Applied Geodesy and Instrument Construction are working on such an instrument; the difficulty , however, consists in centering the eyepiece of the measuring instrument on the extreme point. There are 17 figures.

ASSOCIATION: Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii (Moscow Institute of Geodetic, Aerial Survey and Cartographic Engineers)

MURAV'YEV, Mikhail Sergeyevich, dotsent; ZAKAZNOV, N.P., red.; SHAMAROVA, T.A., red.izd-va; ROMANOVA, V.V., tekhn.red.

[Descriptive and projective geometry] Machertatel'naia i proektivnaia geometriia. Moskva, Izd-vo geodez.lit-ry, 1960. 323 p. (MIRA 13:12)

(Geometry, Projective)
(Geometry, Descriptive)

LANGLEBEN, Mikhail L'vovich; MURAV'YEV, M.V., nauchn. red.; SHVETSOVA, E.M., ved. red.; YASHCHURZHINSKAYA, A.B., tekhn. red.

[Equipment and tools for the underground repair of oil wells] Oborudovanie i instrumenty dlia podzemnogo remonta skvazhin. Leningrad, Gostoptekhizdat, 1963. 155 p. (MIRA 17:2)

MURAV'YEV, M. V.

"Work Capacity After Having Undergone Closed Cranial Trauma." Cand Med Sci, USSR, 23 Nov 54. (VM, 12 Nov 54)
Acad Med Sci USSR

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

MURAV'YEV, M.V.

Penetrating stab wounds of the thorax. Sov.med. 20 no.6:68-72 '56.
(MLRA 9:9)

1. Iz kafedry obshchey khirurgii (zav. prof. V.I.Struchkov) lechebnogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta na baze klinicheskoy bol'nitsy imeni Medsantrud (glavnyy vrach A.P.Timofeyeva)

(THORAX, wounds and injuries,
penetrating stab-incised wds. (Rus))
(WOUNDS AND INJURIES,
thorax, penetrating stab-incised wds. (Rus))

SIVKOV, I.I.; POPOV, V.G.; MEPORENT, M.I.; SMETNEV, A.S.; MURAV'YEV, M.V.; YASTREBTSOVA, M.L.

Cardiac catheterization in acquired heart diseases. Terap.arkh. 29 no.3:37-51 Mr '57. (MIRA 10:8)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - deystvitel'nyy chlen AMN SSSR prof. V.N.Vinogradov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova
(CATHETERIZATION, CARDIAC,
in acquired heart dis. (Rus))

GLADYREVSKIY, N.L.; MURAV'YEV, M.V.

Treatment of fractures of the tubular bones by intraosseous fixation. Trudy 1-go MMI 7:91-99 '59. (MIRA 15:11)
(INTERNAL FIXATION IN FRACTURES)

MURAV'YEV, M.V.

Perforation of subacute ulcer of the stomach in azotemic uremia. Sov.med. 23 no.6:129-131 Je '59. (MIRA 12:9)

1. Iz kafedry obshchey khirurgii (zav. - prof.V.I.Struchkov) lechebnogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova na baze Klinicheskoy bol'nitsy imeni Medsantrud (glavnyy vrach A.P.Timofeyeva).
(PEPTIC ULCER PERFORATION)
(UREMIA compl.)

MURAV'YEV, M.V.; ZLOCHEVSKIY, P.M.; GROMOVA, G.V.

Electrocardiographic data on functional changes of the heart during catheterization of the right heart and the pulmonary artery. Terap. arkh. 31 no.2:22-29 F '59. (MIRA 12:1)

1. Iz kafedry obshchey khirurgii (zav. - prof. V.I. Struchkov) lechebnogo fakul'teta i filiala (rukovoditel' - prof. B.B. Kogan) kafedry gospital'noy terapii (zav. - deystvitel'nyy chlen AMN SSSR prof. A.L. Myasnikov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova na baze klinicheskoy bol'nitsy No.23 imeni Medsantrud.

(CATHETERIZATION, CARDIAC,
right heart & pulm. artery, ECG changes (Rus))
(ECG,
in catheterization of right heart & pulm. artery (Rus))

MURAV'YEV, M.V. (Moskva, G-34, Lopukhinskiy per., d.6, kv. 1)
KHARKHARDINA, F.A.

History of surgery for mitral stenosis. Vest. khir. 82 no.5:137-145 My '59. (MIRA 12:7)

1. Iz kafedry obshchey khirurgii (zav. - prof. V. I. Struchkov) lechebnogo fakul'teta 1-go Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova.
(MITRAL VALVE--DISEASES)

MURAV'YEV, M.V. (Moskva, Lopukhinskiy per., d. 6, kv. 1); ROMASHOV, F.N.; LI TIN'-MIN'

Method for shunting the superior vena cava in forming a cavapulmonary anastomosis. Grud. khir. 2 no.1:43-45 Ja-F '60. (MIRA 15:3)

1. Iz Instituta grudnoy khirurgii AMN SSSR (dir. - prof. S.A. Kolesnikov).

(VENA CAVA—SURGERY)
(PULMONARY ARTERY—SURGERY)

MURAV'YEV, M.V.; ROMASHOV, F.N. (Moskva)

Congenital heart defects; diagnosis and surgical treatment. Fel'd. i akush. 25 no.5:55-59 My '60. (MIRA 13:7)
(HEART--ABNORMITIES AND DEFORMITIES)

MURAV'YEV, M.V.; RYZHKOV, Ye.V.; GROMOVA, G.V. (Moskva)

Certain aspects of pulmonary circulation in chronic suppurative processes in the lungs. Klin.med. 38 no.10:97-105 O '60. (MIRA 13:11)

1. Iz kafedry obshchey khirurgii (zav. - prof. V.I. Struchkov) lechebnogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova i morfologicheskoy laboratorii Deystvitel'nogo chlena AMN SSSR I.V. Davydovskogo na baze klinicheskoy bol'nitsy No.23 imeni Medsantrud (glavnyy vrach A.P. Timofeyeva).

(PULMONARY ARTERY) (LUNGS--DISEASES)

KOGAN, B.B., prof.; ZLOCHEVSKIY, P.M.; MURAV'YEV, M.V., kand.meditsinskikh nauk

Clinical and physiological investigation of the action of euphyllin in patients with chronic cor pulmonale. Kaz. med. zhur. 41 no.3:17-22 My-Je '60. (MIRA 13:9)

1. Iz filiala (zav. - prof. B.B.Kogan) gospital'noy terapevticheskoy kliniki I Moskovskogo ordena Lenina meditsinsko go instituta im. I.M. Sechenova.

(AMINOPHYLLINE) (HEART--DISEASES--DIAGNOSIS)
(LUNGS--DISEASES)

KACHKOV, A.P.; MURAV'YEV, M.V. (Moskva, Lopukhinskiy per.,d.6,kv.1); VASIL'YEV, A.N.

Peacetime wounds of the heart. Grud. khir. 1 no.5:106-109 S-O '61. (MIRA 15:3)

1. Iz kafedry obshchey khirurgii i lechebnogo fakul'teta (zav. - prof. V.I. Struchkov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova na baze klinicheskoy bol'nitsy No.23 imeni "Medsantrud" (glavnyy vrach A.P. Timofeyeva).

(HEART--WOUNDS AND INJURIES)

BURAKOVSKIY, V.I.; MURAV'YEV, M.V.; GEL'SHTEYN, G.G.; YEVTEYEV, Yu.V.; LAGUTINA, A.I.; ROMASHOV, F.N.; RYABOV, G.A.; ROSLAVLEVA, N.G.; TERENT'YEVA, L.M.; SHPUGA, O.G.

Operation on the "dry" heart during hypothermia in patients with congenital heart defects. Grud.khir. no.3:3-14 '61. (MIRA 14:9)

1. Iz otdeleniya zabolevaniya serdtsa i sosudov u detey (zav. - kand.med.nauk V.I. Burakovskiy) Instituta grudnoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akad. A.N. Bakulev) AMN SSSR. Adres avtorov: Moskva, Leningradskiy prosp., d.8. Institut grudnoy khirurgii AMN SSSR.

(HEART—ABNORMITIES AND DEFORMITIES) (HYPOTHERMIA)
(PERFUSION PUMP (HEART))

MURAV'YEV, M.V.; ROMASHOV, F.N.; CHUYEVA, L.F.; SYUY LE-TYAN' [Hsü Lê-t'ien]

Treatment of 120 patients with patent ductus arteriosus. Grud. khir. 3 no.1:28-33 Ja-F '61. (MIRA 16:5)

1. Iz Instituta grudnoy khirurgii (dir. - prof.S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR. Adres avtorov: Moskva, Leninskiy prospekt, 8. Institut grudnoy khirurgii AMN SSSR.

(DUCTUS ARTERIOSIS--LIGATURE)

MURAV'YEV, M.V.; GROMOVA, G.V.; VOL'-EPSHTEYN, G.L.

Some data on pulmonary circulation changes in chronic suppurative processes in the lung. Grud. khir. 3 no.2:68-72 '61. (MIRA 14:4)

(LUNGS—DISEASES) (PULMONARY ARTERY)

MURAV'YEV, M. V.; PETROSYAN, Yu. S.

Diagnosis of subvalvular stenosis of the aorta. Grud. khir. no.5: 7-12 '61. (MIRA 15:2)

1. Iz Instituta grudnoy khirurgii (dir. - prof. S. A. Kolesnikov, nauchnyy rukovoditel' - akad. A. N. Bakulev) AMN SSSR.

(AORTIC VALVE—DISEASES)

STRUCHKOV, Viktor Ivanovich, prof.; BAZHENOVA, A.P., doktor med. nauk; TUMANSKIY, V.K., doktor med. nauk; GRIGORYAN, A.V., kand.med. nauk; KACHKOV, A.P., kand.med.nauk; MARSHAK, A.M., kand.med.nauk; MURAV'YEV, M.V., kand.med.nauk; SIDORINA, F.I., kand.med.nauk; FEDOROV, B.P., kand.med.nauk; VINOGRADOV, V.V., red.; PETROVA, tekhn. red.

[Surgery for suppuration] Gnoinaia khirurgiia; rukovodstvo dlia vrachei. Moskva, Medgiz, 1962. 357 p. (MIRA 15:11)
(SUPPURRATION) (SURGERY, OPERATIVE)

KOLESNIKOV, S. A.; BURAKOVSKIY, V. I.; MURAV'YEV, M. V.; ROMASHOV, F. N.; LYUDE, M. N.

Clinical aspects, diagnosis and surgical treatment of cor triloculare biventriculare. Grud. khir. no.2:16-20 '62. (MIRA 15:4)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S. A. Kolesnikov, nauchnyy rukovoditel' - akad. A. N. Bakulev) AMN SSSR.

(HEART--ABNORMITIES AND DEFORMITIES)

MURAV'YEV, M. V.; YEVTEYEV, Yu. V.

Case of coarctation of the pulmonary artery. Grud. khir. no.2: 75-77 '62. (MIRA 15:4)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S. A. Kolesnikov, nauchnyy rukovoditel' - akad. A. N. Bakulev) AMN SSSR.

(PULMONARY ARTERY--DISEASES)

KOLESNIKOV, S.A., prof.; MURAV'YEV, M.V., dotsent

Defects in the interventricular septum; clinical aspects, diagnosis and surgical treatment. Kardiologiia 2 no.1:59-67 Ja-F '62. (MIRA 15:5)

1. Iz kafedry grudnoy khirurgii TSentral'nogo instituta usovershenstvovaniya vrachey (dir. M.D.Kovrigina) i Instituta serdechno-sosudistoy khirurgii AMN SSSR (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' A.N.Bakulev).

(HEART---DISEASES)

MURAV'YEV, M.V.; ROMASHOV, F.N.; SYUY LE-TYAN' [Hsü Lê-t'ien]

Surgical treatment of patent ductus arteriosus in adults. Vest. khir. 89 no.7:16-22 Jl '62. (MIRA 15:8)

1. Iz Instituta grudnoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchn. rukovoditel' - akad. A.N. Bakulev) AMN SSSR.
(DUCTUS ARTERIOSUS—SURGERY)

MURAV'YEV, M.V.; CHUYEVA, L.F.; SYUY LE-TYAN' (Hsu-Le-t'ien]

Symptom of arterial pressure difference in the arms and legs of patients with patent ductus arteriosus. Kardiologiia 5 no.2:51-55 '63 (MIRA 17:2)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademika A.N. Bakulev) AMN SSSR.

BURAKOVSKIY, V.I.; MURAV'YEV, M.V.; ROMASHOV, F.N.; YEVTEYEV, Yu.V.

Tetralogy of Fallot; clinical aspects, diagnosis, surgical treatment. Grudn. khir. 5 no.3:3-8 My-Je '63 (MIRA 17:1)

1. Iz otdeleniya vrozhdennykh porokov serdtsa (zav. - doktor med. nauk V.I.Burakovskiy) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' akademik A.N. Bakulev) AMN SSSR. Adres avtorov: Moskva V-49, Leninskiy prosp., d.8. Institut serdechno-sosudistoy khirurgii AMN SSSR.

BAKULEV, A.N., akademik; KOLESNIKOV, S.A.,prof.; BURAKOVSKIY, V.I.; GEL'SHTEYN, G.G.; LEBEDEVA, G.K.; MURAV'YEV, M.V.; MEYTINA, R.A.

Artificial blood circulation in combination with hypothermia in the surgery of congenital heart defects. Vest.khir. 90. no.2: 10-19 F'63. (MIRA 16:7)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR. Adres avtorov: Moskva, V-49, Leninskiy pr., d.8, Institut serdechno-sosudistoy khirurgii AMN SSSR.

(HEART—SURGERY) (HYPOTHERMIA)
(BLOOD—CIRCULATION, ARTIFICIAL)

MURAV'YEV, M.V. (Moskva, Lopukhinskiy pereulok, d.6, kv.1); ROMASHOV, F.N.; YEVTEYEV, Yu.V.

Diagnosis of atresia of the tricuspid valve and its surgical treatment. Grudn. khir. 4 no.5:39-44 S-O'62 (MIRA 17:3)

1. Iz Instituta grudnoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR.

MURAV'YEV, M.V.

Surgical treatment of an isolated defect of the interventricular septum. Grud. khir. 6 no.2:17-23 Mr-Ap '64. (MIRA 18:4)

1. Kafedra serdechno-sosudistoy khirurgii TSentral'nogo instituta usovershenstvovaniya vrachey i otdeleniye vrozhdennykh porokov (zav. - doktor med. nauk V.I.Burakovskiy) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' akademik A.N.Bakulev) AMN SSR, Moskva. Adres avtora: Moskva V-40, Leninskiy prospekt, dom 8, Institut serdechno-sosudistoy khirurgii.

BAKULEV, A.N.; MURAV'YEV, M.V.; KUKHAREVA, N.S. (Moskva V-49, Donskaya ul., d.44, kv.18)

Indications for surgical treatment of the defects of the interventricular septum. Grud. khir. 6 no.6:10-16 N-D '64.
(MIRA 18:7)

1. Institut serdechno-sosudistoy khirurgii (direktor - prof. S.A. Kolesnikov) AMN SSSR i klinika fakul'tetskoy khirurgii imeni S.I. Spasokukotskogo (direktor - akademik A.N. Bakulev), Moskva.

BURAKOVSKIY, V.I.; MURAV'YEV, M.V.; ROMASHOV, F.N.

Lutembacher's syndrome. Vest. khir. no.7:37-40 Jl '64. (MIRA 18:4)

1. Iz instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSR. Adres avtorov: Moskva, V-49, Leninskiy prospekt 8, Institut serdechno-sosudistoy khirurgii AMN SSSR.

MURAV'YEV, M.V.

[Defects of the interventricular septu · clinical aspects, diagnosis and surgical treatment] Defekty mezhzheludochkovoi peregorodki; klinika, diagnostika, khirurgicheskoe lechenie. Moskva, TSentr. in-t usovershenstvovaniia vrachei, 1965. 47 p. (MIRA 18:8)

MURAV'YEV, M.V.; ROMASHOV, F.N.; SYUY LE-TYAN' [Hsü Le-t'ien]; YEVTEYEV, Yu.V.

Surgical treatment of a patent ductus arteriosus complicated by pulmonary hypertension. Khirurgiia no.1:12-18 '63. (MIRA 17:5)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik N.M. Makarov) AMN SSSR.

MURAV'YEV, N.

The 35th international fur auction in Leningrad. Vnesh. torg. 43 no.10:18 '63. (MIRA 16:11)

1. Predsedatel' Vsesoyuznogo ob"yedineniya po eksportu i importu pushniny Ministerstva vneshney torgovli SSSR "Soyuzpushnina."

S/123/60/000/020/011/019
A005/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1960, No. 20, p. 194, # 111049

AUTHOR: Murav'yev, N. I.

TITLE: Mechanized Section of Centrispinning of Steel

PERIODICAL: V sb.: Peredovoye v tekhnol. liteyn. proiz-va. Khar'kov, 1958, pp. 42-49

TEXT: The experience of the Kovrovskiy ekskavatornyy zavod (Kovrov Excavator Plant) with the introduction of the centrispinning method is described, as well as a conveyer unit of 10 items. There are 7 figures.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

MURAV'YEV, N.V.

History of investigation on leptospirosis in Stavropol' territory.
Zhur. mikrobiol. epid. i immun. no.11:113-114 N '54. (MLRA 8:1)
(LEPTOSPIROSIS, prevention and control,
in Russia, hist.)

MURAV'YEV, N.V.

Problem of the differential diagnosis of malaria form leptospirosis. Zhur.mikrobiol., epid. i immun. 27 no.8:97-101 Ag '56. (MLRA 9:10)

1. Iz rayonnoy bol'nitsy Severo-Osetinskoy ASSR.
(ALARIA, differential diagnosis,
leptospirosis (Rus))
(LEPTOSPIROSIS, differential diagnosis,
malaria (Rus))

F-3

MURAV'YEV, N.V.

USSR / Microbiology. Microbes Pathogenic to Humans and Animals.

Abs Jour : Ref Zhur - Biol., No 2, 1958, No 5325

Author : Murav'ev, N.V.
Inst : Not given
Title : On the Effect of Penicillin on the Course of Leptospirosis Infection Type II and Formation of Specific Antibodies.

Orig Pub : Sov. meditsina, 1957, No 3, 37-41

Abstract : The author used penicillin (I) during the summer-autumn months in districts where there were natural foci of malaria and leptospirosis. Of 16 patients, only in eight, mostly children 2-11 years of age, did the author note a rapid drop in temperature, improved feeling of health and no relapses. He injected from 400,000 to 1,500,000 units and the patients were discharged on the 4-8th day after onset of the disease.

Card : 1/2

MURAV'YEV, M.V.

Obstetrical care in the North Ossetian A.S.S.R. in 1955. Sov.zdrav. 16 no.6:23-28 Je '57. (MLRA 10:8)

1. Iz respublikanskoy klinicheskoy bol'nitsy Severo-Osetinskoy ASSR (glavnyy vrach S.S.Khanayev)
(OBSTETRICS
in Russia, need for obst. hosp. in Ossetic region)

MURAV'YEV, N.V. (Ordzhonikidze)

Charts for planning home calls to infants during their first year of life in rural areas. Med. sestra 16 no.8:28-29 Ag '57.
(MIRA 10:12)

(INFANTS--CARE AND HYGIENE)

MURAV'YEV, N.V.

Effect of penicillin on the course of leptospirous infection (type II) and the formation of specific antibodies. Sov.med. 21 no.3:37-41 Mr '57. (MLRA 10:7)

1. Iz Darg-Kokhskoy rayonnoy bol'nitsy Severo-Osetinskoy ASSR.
(LEPTOSPIROSIS, ther.
penicillin, eff. on course & antibody form.)
(PENICILLIN, ther. use
leptospirosis, eff. on course & antibody form.)

MURAV'YEV, N.V. (g. Ordzhonikidze).

Check system for keeping records of laboratory examinations of hospital patients. Med.sestra 17 no.12:25-26 D'58 (MIRA 11:11)
(HOSPITALS)
(DIAGNOSIS)

MURAV'YEV, N.V. (Ordzhonikidze)

Obstetrical assistance in the Zamankul sector hospital from 1953 to 1958. Fel'd. i akush. 24 no.7:41-47 Jl '59. (MIRA 12:10)
(ZAMANKUL--OBSTETRICAL NURSING)

MURAV'YEV, N.V.

Botkin's disease in a rural district, 1952-1956. Zhur. mikrobiol.epid. i immun. 30 no.5:141-142 My '59.
(MIRA 12:9)

1. Iz Dargo-Kokhskoy rayonnoy bol'nitsy Severo-Osetinskoy ASSR.

(HEPATITIS, INFECTIOUS)

MURAV'YEV, N.V. (Ordzhonikidze)

Device for the statistical grouping of cards in the study of morbidity. Zdrav.Ros.Feder. 4 no.1:27-29 Ja '60. (MIRA 13:5)
(DISEASES--REPORTING)

MURAV'YEV, N.V.; KHESTANOVA, L.I.; SHAPOSHNIKOVA, V.V.

Method for analysing accidents in rural areas. Zdrav. Ros. Feder. 4 no.12:11-14 D '60. (MIRA 13:12)

1. Iz Respublikanskoy bol'nitsy Severo-Osetinskoy ASSR (glavnyy vrach.S.S.Khanayev).
(KIROV DISTRICT (OSSETIA)—ACCIDENTS)

MURAV'YEV, N.V. (Ordzhonididze)

Organization of archives for preservation of the history of diseases in rural hospitals. Sov. zdrav. 20 no. 7:69-72 '61. (MIRA 15:1)
(MEDICAL RECORDS)

MURAV'YEV, N.V. (Ordzhonikidze)

Work of the organizational and emthodological office of the North Ossetian Republican Clinical Hospital. Sov.zdrav. 21 no.8:58-60 '62. (MIRA 15:11)

(OSSETIA, NORTH--HOSPITALS--ADMINISTRATION)

MURAV'YEV, N.V.; KHESTANOVA, L.I. (Ordzhonikidze)

Efforts of the North Ossetian Republic Hospital to improve the qualifications of medical workers of the rural area. Zdrav.Ros. Feder. 7 no.3:32-35 Mr '63. (MIRA 16:3)
(OSSETIA, NORTH--PUBLIC HEALTH)
(OSSETIA, NORTH--MEDICINE--STUDY AND TEACHING)

MURAV'YEV, N.V.

Training head physicians of district hospitals to analyze the activities of therapeutic and prophylactic institutions. Zdrav. Ros. Feder. 7 no.10:20-22 O'63 (MIRA 16:11)

1. Iz Severo-Osetinskoy respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach S.S. Khanayev.)

*

MURAV'YEV, N.V.

Improving the qualifications of senior nurses in rural district hospitals. Med. sestra 22 no.6:16-18 Je'63. (MIRA 16:9)

1. Iz Severo-Osetinskoy respublikanskoy klinicheskoy bol'nitsy.
(NURSES AND NURSING)

Compilers: MURAV'YEV, O. A.; POBEDIMOVA, Ye. G.; POYARKOVA, A. I.; PROKHANOV, Ya. I.; SHISHKIN, B. K.; SHTEYNBERG, Ye. I.; YUZEPCHUK, S. V.; AFANAS'YEV, K. S.; BORISOVA, A. G.; VASIL'YEV, V. N.; GORSHKOVA, S. G.; ILIN, M. M.; KLOKOV, M. V.; MALEYEV, V.P.; KOMAROV, V. L. (Acad.); Editors: SHISHKIN, B. K.; BOBROV, Ye. G.

Flora of the USSR, Vol 15, Moscow-Leningrad, 743 pp., 1950

Book W-22202, 7 Apr 52

MURAV'YEV, P

1. P. MURAV'YEV.
2. USSR (600)
4. Albegra - Study and Teaching
7. Concept of the absolute value of a real number in secondary schools. Mat. v shkole no. 6. 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

AURAV'YEV, P.A.

Solving certain differential equations of the n order with retarding arguments (various retardations) by the operational method. Izv.vys.ucheb.zav.; mat. no.1:175-187 '57. (MIRA 12:10)

1. Ivanovskiy energeticheskiy institut imeni V.I.Lenina.
(Differential equations) (Calculus of operations)

SOV/124-58-1-94

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 12 (USSR)

AUTHOR: Murav'yev, P. A.

TITLE: An Operator Solution of Some Differential Equations With a Lagging Argument Encountered in Automatic-control Engineering (Resheniye operatornym metodom nekotorykh differentsial'nykh uravneniy s zapazdyvayushchim argumentom, vstrechayushchikhsya v tekhnike avtoregulirovaniya)

PERIODICAL: Sb. nauchn. tr. Ivanovskogo energ. in ta, 1957, Nr 7, pp 5-11

ABSTRACT: An examination of equations of the type

$$\phi''(t) + a_1\phi'(t) + a_2\phi(t) + a_3\phi(t-\tau) = 0$$

$$\phi'''(t) + a_1\phi''(t) + a_2\phi'(t) + a_3\phi(t) + a_4\phi'(t-\tau) + a_5\phi(t-\tau) = 0$$

which by means of the transform $\phi(t) = e^{kt}y(t)$ are reduced to a form that does not contain a first derivative in the first case or a second derivative in the second case. The solutions are found by means of Laplace transforms with initial conditions of the type

Card 1/2

An Operator Solution of Some Differential Equations With a Lagging (cont.)

$$y^{(k)}(+0) = c_k, \qquad y^{(k)}(t) = 0 \qquad \text{for } t < 0,$$

where c_k are constants and k=0.1 in the first case and k=0, 1, 2 in the second case. The solutions are obtained in the form of series.

V. S. Razumikhin

Card 2/2

16.3400

26628
S/044/60/000/002/005/009
C111/C222

AUTHOR: Murav'yev, P.A.

TITLE: On the approximate expressions for solutions of some differential equations with a lagging argument

PERIODICAL: Referativnyy zhurnal. Matematika, no. 2, 1960, 201, abstract 2310. (Sb. nauchn. tr. Ivanovsk. energ. in-ta, 1958, vyp 8, 8-23)

TEXT: The author seeks the approximate solution of the initial value problem

$$\sum_{k=0}^{n} a_k x^{(k)}(t) + \sum_{k=0}^{n} b_k x^{(k)}(t - \tau) = 0 \quad (0 < t < a ; \ \tau > 0) ,$$

$$x(t) \equiv 0 \ (t < 0) , \quad x^{(k)}(+ 0) = l_k \quad (k = 0, \ldots, n-1)$$

(all coefficients and the delay are constant, $a_n = 1$). Therefore the author takes the operator expression of the solution on a finite interval

Card 1/ 2

26628
S/044/60/000/002/005/009
C111/C222

On the approximate expressions ...

which was obtained in an earlier paper of the author (cf. e.g. R.zh.Mat., 1957, 6336) and then he applies the method of ... izumi [abstracter's note : not intelligible] according to which the original is approximately determined as a product of an exponential function and the sum of a Fourier series. The appearing error is estimated. A numerical example is given.

[Abstracter's note : Complete translation.]

Card 2/2

MURAV'YEV, P.A., kand.fiz.-matem.nauk

Solving linear differential equations of the n-th order with constant coefficients and retarded argument by means of an operational method. Sbor.nauch.trud IEI no.8:24-37 '58.
(MIRA 13:4)

(Differential equations, Linear)

AUTHOR: Murav'yev, P.A. (Ivanovo) 39-44-2-2/10

TITLE: Solution of Certain Differential Equations and Systems of Differential Equations With Lagging Argument With the Aid of the Operational Calculus (Resheniye operatsionnym metodom nekotorykh differentsial'nykh uravneniy i sistem differentsial'nykh uravneniy s zapazdyvayushchim argumentom)

PERIODICAL: Matematicheskiy Sbornik, 1958, Vol 44, Nr 2, pp 157-178 (USSR)

ABSTRACT: The paper consists of 3 paragraphs. In the first one the author considers the equation

(1) $Lx(t) + \Lambda x(t-\tau) = F(t)$,

where

$$L \equiv \sum_{k=0}^{n} a_k \frac{d^{n-k}}{dt^{n-k}} , \quad \Lambda \equiv \sum_{k=0}^{n} b_k \frac{d^{n-k}}{dt^{n-k}} .$$

With the aid of Laplace transformation the existence and uniqueness of the solution is proved at first. Then a numerically useful method for the explicit determination of the solution is given, for n = 2 separately considered and il-

Card 1/2

Solution of Certain Differential Equations and Systems of Differential Equations With Lagging Argument With the Aid of the Operational Calculus 39-4-2-2/10

lustrated by an example. In the second paragraph the author applies the method of Koizumi for an approximative solution of an homogeneous equation (1). The third paragraph deals with systems, whereby in a system several different dead times (displacements of the argument) are admitted. Here with similar methods the existence and uniqueness of the solution is proved equally and indications for the performance of explicit integration is given. There are 7 references, 5 of which are Soviet, 1 Polish, and 1 American.

SUBMITTED: September 10, 1956

AVAILABLE: Library of Congress

1. Differential equations - Analysis 2. Operational calculus - Applications 3. Laplace transformations - Applications

Card 2/2

16(0) PHASE I BOOK EXPLOITATION SOV/3342

Akademiya nauk SSSR. Vychislitel'nyy tsentr

Vychislitel'nye matematika (Computer Mathematics) Moscow, Izd-vo AN SSSR, 1959. 118 p. (Series: Its: Sbornik, 5) Errata slip inserted. 3,200 copies printed.

Resp. Ed.: V. A. Ditkin, Professor; Ed.: N. V. Yakovkina; Tech. Ed.: I. S. Markovich.

PURPOSE: This book is intended for applied mathematicians, scientific workers, engineers and scientists whose work involves computation.

COVERAGE: This book contains 9 articles on problems in computer mathematics. Five articles are devoted to problems of nomography. There are individual articles on the numerical integration of first order ordinary differential equations, the approximate integration of multiple integrals, finding values with arbitrary distribution, stochastic processes and the Monte Carlo method, and the finding of the original function when its transform is a proper fraction. References accompany each article.

Card 1/7

MURAV'YEV, P.A.

Problem of finding the original function when the plotting-function is a rational proper fraction. Vych. mat. no.5:141-148 '59. (MIRA 13:3)
(Calculus, Operational)

34765
S/140/62/000/001/006/011
C111/C444

AUTHOR: Murav'yev, P. A.

TITLE: The generalised derivative and its application to the solution of ordinary differential equations

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, no. 1, 1962, 89-100

TEXT: The generalised derivative of a function f(x) differentiable on (a,b) is defined by

$$\lim_{\Delta x \to 0} \frac{f(x+\alpha \Delta x)-f(x)}{\Delta x} \equiv \tilde{f}'_{(\alpha)}(x), \quad x \in (a,b), \qquad (1.1)$$

where $\alpha = \alpha(x)$ is a function, unique on (a,b), different from zero, generally being continuous and sufficiently smooth. It is stated that for the introduced generalised derivative there hold all basic principles of differentiation. The Taylor formula has the form

$$f(b) = f(a) + \\ + \tilde{f}'_{(a)}(a)\,h(a,b) + \frac{\tilde{f}''_{(a)}(a)}{2!}h^2(a,b) + \ldots + \frac{\tilde{f}^{(n)}_{(a)}(a)}{n!}h^n(a,b) + R_n, \qquad (4.1)$$

Card 1/6

where

$$h^n(a, b) = \left(\int_a^b \frac{dx}{a(x)}\right)^n, \quad R_n = \frac{1}{n!}\int_a^b \frac{f_{(\alpha)}^{(n+1)}(x)}{a(x)} h^n(x, b)\, dx \quad (n = 1, 2, 3, \ldots).$$

The integral function F(x) of the function f(x) in the sense of α is defined by

$$\tilde{F}'_{(\alpha)}(x) = f(x), \quad x' \in (a, b) \tag{5.1}$$

from which it follows

$$\int \frac{f(x)}{\alpha(x)}\, dx = F(x) + C \tag{5.2}$$

The n-fold integral is denoted by

$$\int_{a_n(\alpha_1 \alpha_2 \ldots \alpha_n)}^{x(n)} dx \equiv \int_{a_n}^{x} \frac{dx}{\alpha_1} \int_{a_{n-1}}^{x} \frac{dx}{\alpha_2} \cdots \int_{a_1}^{x} \frac{dx}{\alpha_n} \tag{5.6}$$

Card 2/6

The generalised derivative and its ...

If one puts $\alpha_1 = \alpha_3 = \alpha_5 \ldots = \alpha$, $\alpha_2 = \alpha_4 = \alpha_6 = \ldots \beta$ in (5.6), then one obtains

$$\int_{a_n(\alpha\beta\alpha\beta\ldots\gamma)}^{x(n)} dx = \int_{a_n}^{x} \frac{dx}{\alpha} \int_{a_{n-1}}^{x} \frac{dx}{\beta} \int_{a_{n-2}}^{x} \frac{dx}{\alpha} \ldots \int_{a_1}^{x} \frac{dx}{\gamma}, \qquad (6.4)$$

where $\gamma = \begin{cases} \alpha & \text{for n-odd} \\ \beta & \text{for n-even} \end{cases}$. Further on the notation

$$u_0 \equiv 1, \; u_1 = \int_{a_1}^{x} \frac{dx}{\alpha}, \; u_k = \int_{a_k}^{x} \frac{dx}{\alpha} \int_{a_k}^{x} \frac{u_{k-2}}{\beta} dx \quad (k=2,3,4,\ldots), \qquad (6.5)$$

is introduced and the series

$$\text{can } x = 1 + u_2 + u_4 + \ldots + u_{2k} + \ldots, \qquad (6.6)$$

Card 3/6

The generalised derivative and its ...

$$\text{san } x = u_1 + u_3 + u_5 + \dots + u_{2k+1} + \dots \quad (k = 0,1,2,\dots) \quad (6.7)$$

are defined for the functions Canus x and Sanus x. The introduced terms are used for the solution of ordinary differential equations.

Theorem 3: Every equation

$$y'' + py' + qy = 0 \quad (7.1)$$

p and q being continuous, can be represented in the form

$$\tilde{y}''_{(\alpha\beta)} = y \,. \quad (7.2)$$

The general solution of (7.2) is

$$y = c_1 \text{ can } x + c_2 \text{ san } x, \quad (7.4) \,.$$

Theorem 5: Every equation

$$y^{v} + a_1 y'' + a_2 y' + a_3 y = 0, \quad (8.5)$$

where a_1, a_2, a_3, $\frac{1}{a_3}$ are continuous functions of x on (a,b), is representable in the form

$$\tilde{y}^{*}_{(\alpha\beta\gamma)} = y \qquad (8.1)$$

$\alpha(x)$, $\beta(x)$, $\gamma(x)$, $\frac{1}{\alpha(x)}$, $\frac{1}{\beta(x)}$, $\frac{1}{\gamma(x)}$ being continuous on (a,b) and α'', β' existing.

The solution of (8.1) is

$$y = c_1 P(x) + c_2 Q(x) + c_3 R(x), \qquad (8.4)$$

where P, Q, R are similar u-series as the ones considered above.

Besides of the mentioned equations there are also considered equations

$$\tilde{y}^{(4)}_{(\alpha\beta)} + p\tilde{y}''_{(\alpha\beta)} + qy = 0 \qquad (8.8)$$

Card 5/6

The generalised derivative and its ...

where p, q are constants, and

$$\tilde{y}^{(n)}_{(\alpha)} + a_1 \tilde{y}^{(n-1)}_{(\alpha)} + a_2 \tilde{y}^{(n-2)}_{(\alpha)} + \ldots + a_n y = 0 \qquad (8,14)$$

where a_k are constant.

There is one Soviet-bloc reference. The one reference to English-language publications reads as follows: I. H. Barret, A Prüfer transformation matrix differential equations. Proc. Amer. Math. Soc., 8 no 3, p. 510-518, 1957

ASSOCIATION: Ivanovskiy energeticheskiy institut (Ivanov Energetic Institute)

SUBMITTED: April 28, 1959

Card 6/6

MURAV'YEV, P.A.

"Modern operational calculus with applications in technical mathematics." by N.W. McLachlan. Reviewed by P.A. Murav'ev. Zhur. vych. mat. i mat. fiz. 4 no.5:974-976 S-O '64.
(MIRA 17:12)

MURAV'YEV, P.A.

A generalization of the Laplace-Carson transformation with application in the solving of linear differential equations with variable coefficients. Bul Inst Politeh 26 no.4:39-50 Jl-Ag '64.

1. V.I.Lenin Electric Power Institute, Ivanovsk.

L 2582-66 EWT(d) IJP(c)

ACCESSION NR: AP5025436 UR/0140/65/000/004/0091/0099
517.94

AUTHOR: Murav'yev, P. A. (Ivanovo) 44,55 23 B

TITLE: Application of the α-operational method to solution of linear differential equations 16,44,55

SOURCE: IVUZ. Matematika, no. 4, 1965, 91-99

TOPIC TAGS: differential equation, integral equation

ABSTRACT: The author shows that

$$y^{(n)} + p_1 y^{(n-1)} + p_2 y^{(n-2)} + \cdots + p_n y = f(x),$$

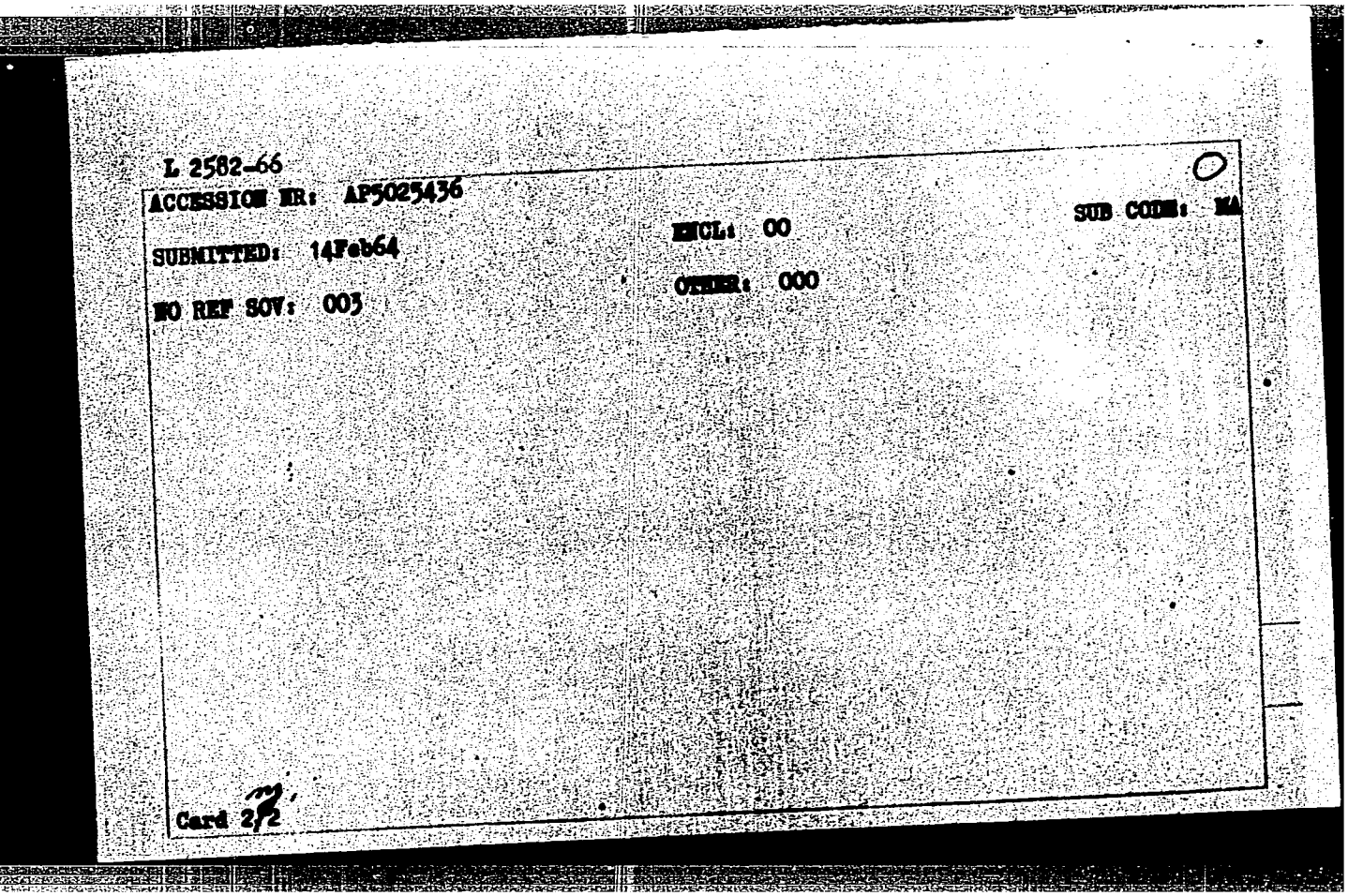
can always be reduced to the Volterra equation

$$\tilde{y}_{(\alpha)}^{(n)} = \beta_0 \tilde{y}_{(\alpha)}^{(n-2)} + \beta_1 \tilde{y}_{(\alpha)}^{(n-3)} + \cdots + \beta_{n-2} \tilde{y}_{(\alpha)}^{\prime} + \beta_{n-1} y + \varphi(x),$$

of second kind. This latter often permits simpler solution than the original differential equation (1). To illustrate the uses of this reduction the author does a detailed study of second and third order linear equations. Orig. art. has: 46 formulas.

ASSOCIATION: none

Card 1/2



L 2582-66

ACCESSION NR: AP5025436

SUBMITTED: 14Feb64

NO REF SOV: 003

ENCL: 00

OTHER: 000

SUB CODE: MA

Card 2/2

L 55250-65 EWT(d) Pg-4 IJP(c)

ACCESSION NR: AP5015118 UR/0376/65/000/004/0449/0463

AUTHOR: Murav'yev, P. A.

TITLE: Solution of ordinary differential equations by separation of a derivative with multiplication

SOURCE: Differentsial'nyye uravneniya, no. 4, 1965, 449-463

TOPIC TAGS: differential equation, integral equation

ABSTRACT: Under the assumption that the general solution of the homogeneous equation

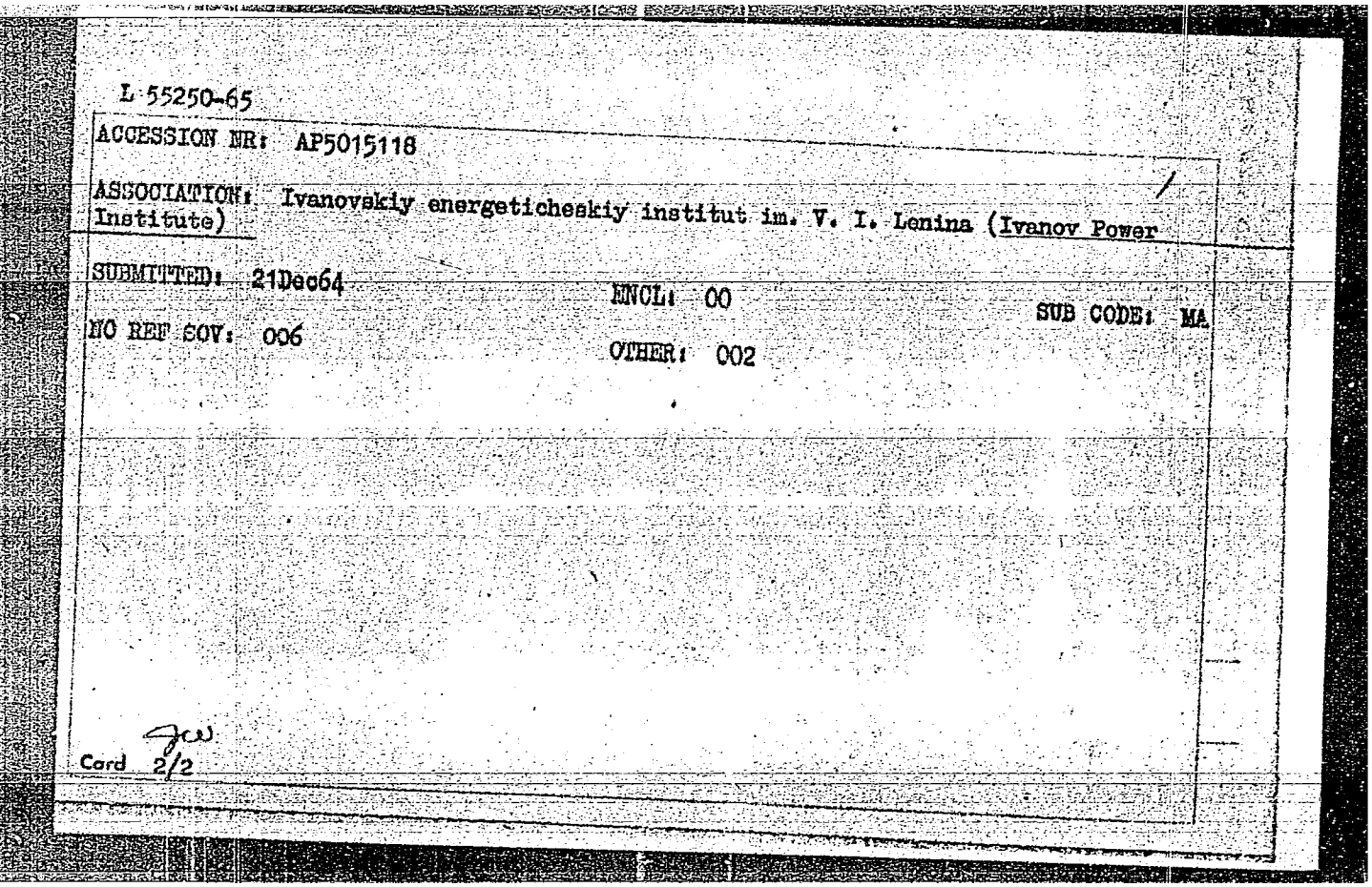
$$z^{(n)} + a_1 z^{(n-1)} + \ldots + a_n z = 0 \qquad (1)$$

is known, the author is able to transform the inhomogeneous equation

$$y^{(n)} + a_1 y^{(n-1)} + a_2 y^{(n-2)} + \ldots + a_n y = \varphi(x) \qquad (2)$$

into a form (derivative with multiplication) which admits easy inversion. He solves the homogeneous equations via power series, perturbations, reduction to Volterra type integral equations and integral series. He also gives illustrative examples and applications. Orig. art. has: 84 formulas.

Card 1/2



L 55250-65

ACCESSION NR: AP5015118

ASSOCIATION: Ivanovskiy energeticheskiy institut im. V. I. Lenina (Ivanov Power Institute)

SUBMITTED: 21Dec64 ENCL: 00 SUB CODE: MA

NO REF SOV: 006 OTHER: 002

Card 2/2

MURAV'YEV, P.A.

Analog of Taylor's formula. Uch. zap. Ivan. gos. ped. inst. 31: 37-46 '63. (MIRA 19:1)

1. Submitted September 9, 1960.

L 9025-65 EWT(d) IJP(c)

ACCESSION NR: AR4043040 S/0044/64/000/006/B002/B003

SOURCE: Ref. zh. Matematika, Abs. 6B9

AUTHOR: Murav'yev, P. A.

TITLE: Analogue of the Taylor formula

CITED SOURCE: Uch. zap. Ivanovsk. gos. ped. in-t, v. 31, 1963, 37-46

TOPIC TAGS: holomorphic function, hypercomplex function, Taylor formula, linear differential equation, interpolational polynomial, Cauchy formula

TRANSLATION: Considering the hypercomplex and monogenic functions as conceived by [illegible] the Taylor formula can be used for the partial case.

$$D_1 f(x) = \alpha_1 f'(x) + \beta_1 f(x) + \gamma_1 = z_1,$$
$$D_2 z_1 = D^2 f(x) = \alpha_2 z_1' + \beta_2 z_1 + \gamma_2 = z_2,$$

Card 1/4

L 9025-65

ACCESSION NR: AM4043040

$$\begin{aligned} &\cdots\cdots\cdots\cdots\cdots\cdots \\ &D_k z_{k-1} = D^k f(x) = \alpha_k z_{k-1}' + \beta_k z_{k-1} + \gamma_k = z_k, \\ &\cdots\cdots\cdots\cdots\cdots\cdots \\ &D_n z_{n-1} = D^n f(x) = \alpha_n z_{n-1}' + \beta_n z_{n-1} + \gamma_n = z_n \end{aligned} \quad (1)$$

where $\alpha_k, \beta_k, \gamma_k$ ($k = 1, 2, \ldots, n$) are known functions or constants. For simplicity, the symbol (2) is introduced.

$$\times dx, \ldots \Big) dx \Big) dx. \qquad (2)$$

$$k = 0 \int q_m \varphi(x, dx) = 1.$$

The following theorems were proved: Theorem 1. If in some range of space T the component of the hypercomplex x of function f(x) has continuous derivatives to and

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L 5025-65
ACCESSION NR: AR4043040

including the n-order, while the given functions α_k, β_k, γ_k (k = 1...n) have in this range continuous derivatives of the n-1 order, then the correct formula, analogous to the Taylor formula, is

$$f(x) = e^{-\int \alpha_1 dx} \sum_{k=0}^{n-1} P_{k+1}(a_{k+1}) \int_{\sigma_m(1,3)} \frac{1}{a_m} e^{\int \alpha_m dx} dx + R_n, \qquad (3)$$

where the remainder is

L 2025-65

ACCESSION NR: AP5043040

$$P_{k+1}(a_{n-1}) = [D^k f(a_{k+1})] \exp\left(\int_{a_{k+1}}^{a_{k+1}} a_{k+1} da\right).$$

Theorem 2. If a linear differential equation of the n-order with variable coefficients

$$y^{(n)} = a_1 y^{(n-1)} + \ldots + a_{n-1} y' + a_n y = \varphi(x) \qquad (4)$$

is reducible to the chain equation $D^n f(x) = f_n$, then the function determined by formula (3) will be the general solution of formula (4) under the arbitrary initial conditions

$$f^{(k)}(a) = l_k \; (k = 0, 1, 2, \ldots, n-1); \; f^{(0)}(a) = f(a).$$

From formula (3) may be obtained for the particular case the Taylor formula, the interpolational polynomial and the Kattabiank formula. Formula (3) will lead to the solution of the differential equations. Examples are given. A. Cherkasov

SUB CODE: MA ENCL: 00

Card 4/4

MURAV'YEV, P.F.

Results of organizational methodological work in a consolidated agricultural district. Zdrav. Ros. Feder. 8 no.2:19-20 F'63 (MIRA 17:3)

1. Organizatsionno-metodicheskiy kabinet Shuyskoy rayonnoy bol'nitsy Ivanovskoy oblasti.